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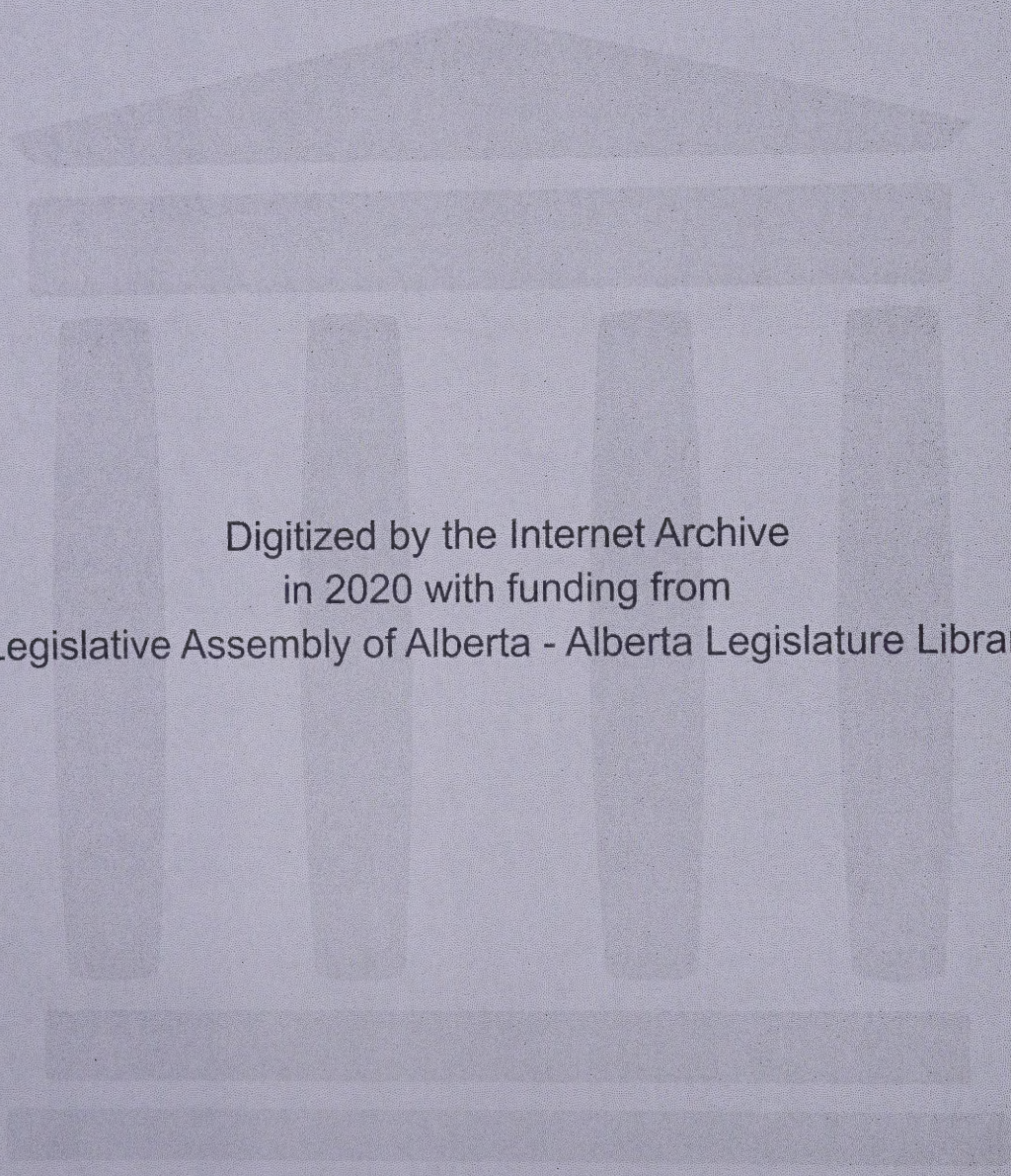


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ANNUAL REPORT
OF
THE MINES DIVISION
OF THE
Department of Mines and Minerals
OF THE
PROVINCE OF ALBERTA

1968

Edmonton:
Printed by L. S. Wall, Queen's Printer

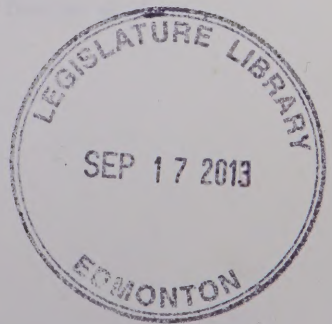


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ANNUAL REPORT
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Department of Mines and Minerals
OF THE
PROVINCE OF ALBERTA

1968



Edmonton:
Printed by L. S. Wall, Queen's Printer

Edmonton, Alberta,
February 5th, 1969.

TO THE HONOURABLE A. RUSSELL PATRICK,
Minister of Mines and Minerals.

Sir:

I have the honour to submit the Annual Report of the Mines Division of the Department of Mines and Minerals for the year ending December 31st, 1968.

Respectfully submitted,
PHILIP MELSON,
Director of Mines

ANNUAL REPORT OF THE MINES DIVISION FOR THE YEAR ENDING DECEMBER 31st, 1968

In this report tonnages are quoted in tons of 2,000 pounds.

The output of coal from the mines in the province was 3,925,114 tons with a valuation of \$12,597,181. This shows an increase of 323,555 tons and an increase of \$90,731, compared with the previous year.

There were 6,769 tons of coal used to make 7,236 tons of briquettes valued at \$77,528. This shows a decrease of 14,267 tons of briquettes made and a decrease in valuation of \$121,456, compared with the previous year. There were 1,261 tons of char, valued at \$13,796, made from coal and briquettes.

The disposition of coal for 1968 and comparison with the previous year follows:

	1968 (Tons)	1967 (Tons)
Sold for consumption in Alberta	2,672,852	2,019,036
Sold for consumption in British Columbia	142,589	165,372
Sold for consumption in Saskatchewan	175,948	504,606
Sold for consumption in Manitoba	73,558	93,020
Sold for consumption in Ontario	15,097	21,956
Sold for consumption elsewhere	54	—
Sold to the United States	9,549	9,857
Sold to Japan	809,437	773,505
Sold to railway companies	3,201	3,960
Put to stock	74,868	105,544
Put to waste	11,313	10,671

The above tonnages include lifted from stock and waste heaps which are not included in the total output.

The Alberta consumption includes coal used under colliery boilers and includes coal used making briquettes and char.

There were 30 subsurface and strip mines which produced coal during the year, employing 1,103 persons who worked 251,053 shifts. This shows a decrease of 5 mines, a decrease of 59 persons, and a decrease of 12,916 shifts, compared with the previous year. There were 24 strip mines employing 282 persons who worked 64,121 shifts and produced 2,998,168 tons. This shows an increase of 2 strip mines, a decrease of 23 persons, a decrease of 6,643 shifts and an increase of 387,594 tons from stripping operations, compared with the previous year.

The number of mines using electrical power during the year was 26. The following table shows the comparison of purchased electrical power in K.W. hrs. by mines for the past ten years.

1959	25,159,068	1964	21,930,976
1960	26,231,225	1965	20,001,530
1961	21,694,596	1966	25,690,710
1962	20,436,598	1967	35,270,464
1963	22,062,185	1968	34,507,138

The total horsepower of electrical motors in use was 29,101 h.p., an increase of 502 h.p., in comparison with 1967. The following tables show a breakdown of horsepower in use, both in subsurface mining operations and strip mining operations.

THE MINES DIVISION

SUBSURFACE OPERATIONS

Above Ground		Below Ground	
Duty	H.P.	Duty	H.P.
Haulage	2,485	Haulage	1,712
Ventilation	750	Ventilation	183
Air Compressing	2,760	Pumping	207
Preparation Plants	3,582	Cutting & Loading	3,298
Miscellaneous	1,201	Miscellaneous	248
Total	10,778	Total	5,648

STRIP MINING OPERATIONS

Duty	H.P.
Preparation Plants	3,651
Compressors	111
Pumping	280
Drilling	28
Electric Shovels and Draglines	7,842
Miscellaneous	763
Total	12,675

The following figures show the number of certain types of electrical equipment used underground during the past ten years.

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Cutting Machines	73	71	66	56	46	46	36	43	36	28
Battery Locomotives	26	22	25	27	27	22	15	20	16	16
Trolley Locomotives	18	8	10	9	9	7	5	7	2	2
Conveyors	38	30	33	31	30	30	22	25	32	28
Coal Drills	55	56	59	50	53	45	41	49	38	37
Continuous Miners	0	1	1	1	1	1	2	3	5	6
Shuttle Cars	0	0	0	0	0	2	2	3	5	7
Face Loaders	13	15	17	16	16	9	8	9	10	10

Twenty-three quarries produced 17,148,252 tons of shale, clay, limestone, building stone, bentonite and oil sands, an increase of 9,957,926 tons compared with the previous year. This increase is mainly attributed to Great Canadian Oil Sands operations at Tar Island.

The total horsepower of electrical motors used in quarries was 16,857 h.p. The following table shows a breakdown of horsepower in use.

QUARRYING OPERATIONS

Duty	H.P.
Drilling	305
Electric Shovels and Draglines	675
Excavators	8,000
Miscellaneous	9,877
Total	16,857

Two hundred and seventeen inspections were made under the terms of The Coal Mines Regulation Act, and 78 under The Quarries Regulation Act.

In addition to the above, 65 inspections were made at 41 abandoned mining locations. Remedial work was required and completed at 12 mines. Seven inspections were made for the cancellation of mining leases.

All complaints made to the Division were investigated.

The total number of accidents in coal mines reported was 34. The number of fatal accidents was nil. One serious accident occurred in a quarry.

There was one prosecution for a contravention of The Coal Mines Regulation Act and conviction was obtained.

Written examinations under The Coal Mines Regulation Act were held on May 7th, 8th and 9th at Edmonton and Calgary with successful candidates as follows: 1 first class, 4 third class, 1 first class mine electrician, 1 surveyor (underground mines), 1 manager (strip mine), 1 foreman (strip mine), 2 blasters (strip mine).

Written examinations under The Quarries Regulation Act were held on May 7th, at Edmonton and Calgary with successful candidates as follows: 2 managers and 1 foreman.

Five blasters' certificates were issued to successful candidates on oral examinations.

Three examinations were held for miners' certificates and 31 certificates were issued to successful candidates. Four substitute miners' certificates, 25 miners' provisional certificates and 64 miners' permits were granted, making a total of 124 certificates issued which is an increase of 8 certificates for the year.

Ten Mine Rescue Certificates were issued in 1968. A provincial Mine Rescue competition was held on May 25th, in Coleman, and the successful Coleman team went on to win the National Competition held in Penticton, B.C.

Mine No. 2, operated by The Canmore Mines, Limited, Canmore, obtained a Lee Norse Continuous Miner, complete with auxiliary equipment. A Maxon Air-Flow heater was installed to heat the ventilating air.

Mine No. 1747, operated by Coleman Collieries Limited, Coleman, installed two 36" Joy Belt Conveyors and started construction for a new coal cleaning plant.

Mine No. 1757, operated by Alberta Coals Ltd., Wabamun, added two D8 and one D9 Caterpillar tractors, a Bucyrus Erie 150B Dragline and four large Euclid Tractors and trailers to their equipment.

Mine No. 1762, operated by Bridge Mining Corporation Ltd., Lethbridge, obtained a 36" McCarthy Coal Drill.

There was considerable activity in coal prospecting and during the year long term contracts for export coal were confirmed by The Canmore Mines, Limited, Cardinal River Coal Co., and McIntyre Coal Mines Limited.

Mr. J. D. B. Brown retired on March 12th, after 24 years service in the Mines Division. Mr. P. Melson was appointed Director of Mines in his stead.

THE MINES DIVISION

NUMBER OF MINES PRODUCING, OPENED AND ABANDONED
DURING THE YEAR ACCORDING TO AREAS AND KIND OF COAL

Director of Mines - F. Melson, Agriculture Building,
Edmonton 6, Alberta. Telephone 229-4421

Electrical Inspector of Mines - J. S. Watson, Agriculture
Building, Edmonton 6, Alberta. Telephone 229-4425

Inspection District	Area	Area Number	Character of Coal	No. of Mines producing during the year	No. of Mines opened during the year	No. of Mines abandoned during the year	Name and Address of District Inspectors of Mines
Calgary	Carbon	6	Sub-bituminous	1	1	1	J.J. Kubin, 805 - Centre Street S. Calgary 2, Alberta. Tel. 269-6687
	Cascade	7	Bituminous	1	...	...
	Drumheller	14	Sub-bituminous	4	...	1	
	Sheerness	38	Sub-bituminous	1	...	...
Edmonton	Ardley	1	Sub-bituminous	2	M. Aschacker, Room 801, Agriculture Building, Edmonton 6, Alberta. Tel. 229-4424
	Camrose	5	Sub-bituminous	1	...	...
	Castor	8	Sub-bituminous	3	...	1	
	Coalspur	11	Sub-bituminous	...	1	1	
	Edmonton	15	Sub-bituminous	3	...	1	
	Pembina	31	Sub-bituminous	3	...	...
	Smoky River	10	Bituminous	1	...	...
	Tofield	42	Sub-bituminous	1	...	1	
	Westlock	45	Sub-bituminous	2	...	...
	Wetaskiwin	46	Sub-bituminous	...	...	1
Lethbridge	Brooks	3	Sub-bituminous	1	I.N. Potter, Administration Building, 909 - 3rd Ave. North, Lethbridge, Alberta. Tel. 328-4471
	Champion	9	Sub-bituminous	...	...	...
	Crowsnest	12-13	Bituminous	3	...	...
	Lethbridge	20	Bituminous	1	1	1	
	Taber	41	Sub-bituminous	2	1	1	
	Redcliff	34	Sub-bituminous	1	
	Total.....	30	4	10	

ANNUAL REPORT, 1968

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PARTICULARS WITH REFERENCE TO THE COAL MINING INDUSTRY IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1968.

SUMMARY OF STATISTICS

Number of tons of coal produced.....	3,925,114
Total valuation of coal produced.....	\$ 12,597,181
Number of tons of briquettes made.....	7,236
Total valuation of briquettes.....	\$ 77,528
Number of tons of char made.....	1,261
Total valuation of char made.....	\$ 13,796
Number of mines in operation.....	30
Number of mines opened.....	4
Number of mines abandoned.....	10
1 mine or 3.33% of the total operating produced	2.55% of the output
2 mines or 6.67% of the total operating produced	4.20% of the output
2 mines or 6.67% of the total operating produced	12.89% of the output
3 mines or 10.00% of the total operating produced	73.81% of the output
7 mines or 23.33% of the total operating produced	1.57% of the output
7 mines or 23.33% of the total operating produced	4.33% of the output
8 mines or 26.67% of the total operating produced	.65% of the output
Average number of persons employed.....	1,103
Average number of persons employed in underground mining.....	821
Average number of persons employed in strip mining.....	282
Average number of days worked.....	228
Total number of manshifts.....	251,053
Number of serious accidents above ground.....	1
Number of serious accidents below ground.....	3
Number of slight accidents above ground.....	15
Number of slight accidents below ground.....	15
Total purchased electric power (kilowatt hours).....	34,507,138
Number of prosecutions instituted.....	1
Number of trade name certificates issued.....	5
Number of provisional second class certificates issued.....	3
Number of provisional third class certificates issued.....	5
Number of provisional electricians' certificates issued.....	5
Number of provisional surveyors' certificates issued.....	1
Number of provisional strip mine foremen's certificates issued.....	11
Number of provisional strip mine blasters' certificates issued.....	3
Number of provisional miners' certificates issued.....	25
Number of miners' permits issued.....	64
Number of miners' certificates issued.....	31
Number of first class certificates issued.....	1
Number of second class certificates issued.....	1
Number of third class certificates issued.....	4
Number of mine surveyors' certificates issued.....	1
Number of first class electricians' certificates issued.....	1
Number of strip mine managers' certificates issued.....	2
Number of strip mine foremen's certificates issued.....	1
Number of strip mine blasters' certificates issued.....	2
Number of first class certificates issued up to Dec. 31/68.....	317
Number of second class certificates issued up to Dec. 31/68.....	625
Number of third class certificates issued up to Dec. 31/68.....	1,871
Number of mine surveyors' certificates issued up to Dec. 31/68.....	252
Number of first class mine electricians' certificates issued up to Dec. 31/68.....	178
Number of second class mine electricians' certificates issued up to Dec. 31/68.....	139
Number of strip mine managers' certificates issued up to Dec. 31/68.....	179
Number of strip mine foremen's certificates issued up to Dec. 31/68.....	268
Number of strip mine blasters' certificates issued up to Dec. 31/68.....	29
Number of strip mine surveyors' certificates issued up to Dec. 31/68.....	2
Number of miners' certificates issued up to Dec. 31/68.....	21,131

THE MINES DIVISION

PARTICULARS WITH REFERENCE TO QUARRIES IN THE
PROVINCE OF ALBERTA DURING THE YEAR ENDING DECEMBER 31, 1968.

SUMMARY OF STATISTICS

Number of tons of limestone produced.....	1,612,953
Number of tons of bentonite produced.....	5,141
Number of tons of shale and clay produced.....	484,290
Number of tons of building stone produced.....	2,590
Number of tons of oil-sands produced.....	15,043,278
Number of quarries in operation.....	23
Number of quarries opened.....	2
Number of quarries abandoned.....	1
Number of persons employed.....	353
Average number of days worked.....	133
Total number of man-shifts.....	87,455
Number of serious accidents.....	1
Number of pounds of dynamite used.....	144,107
Number of pounds of ammonia nitrate used.....	1,479,215
Number of detonators used.....	8,236
Number of shots fired.....	12,407
Number of primers used.....	1,463
Number of missed fire shots.....	57
Amount of prima cord used (feet).....	92,714
Number of provisional managers' certificates issued.....	4
Number of provisional foremen's certificates issued.....	14
Number of provisional blasters' certificates issued.....	1
Number of managers' certificates issued.....	2
Number of foremen's certificates issued.....	1
Number of blasters' certificates issued.....	5
Number of managers' certificates issued up to December 31st, 1968.....	31
Number of foremen's certificates issued up to December 31st, 1968.....	56
Number of blasters' certificates issued up to December 31st, 1968.....	70

ANNUAL PRODUCTION AND VALUATION OF COAL FROM MINES
IN THE PROVINCE OF ALBERTA
For the Years 1949 to 1968 Inclusive

Year	Output Tons	Valuation Dollars
1949.....	8,616,983	\$ 44,541,538
1950.....	8,118,206	41,631,579
1951.....	7,661,276	41,000,953
1952.....	7,194,472	39,974,318
1953.....	5,917,423	32,158,435
1954.....	4,859,136	26,349,275
1955.....	4,456,578	23,486,399
1956.....	4,329,639	23,283,966
1957.....	3,155,354	17,287,229
1958.....	2,519,939	12,778,111
1959.....	2,549,517	12,892,747
1960.....	2,404,093	11,439,705
1961.....	2,027,826	10,471,217
1962.....	2,087,310	9,983,327
1963.....	2,289,943	9,866,962
1964.....	2,971,133	11,189,087
1965.....	3,413,928	12,172,001
1966.....	3,467,254	12,067,044
1967.....	3,601,559	12,506,450
1968.....	3,925,114	12,597,181

PER CAPITA PRODUCTION OF MINES IN THE PROVINCE
For the Years 1949 to 1968 Inclusive

Year	Gross Tons of coal mined	Total average No. of men employed	Tons of coal mined per man employed
1949.....	8,616,983	8,682	993
1950.....	8,118,206	7,999	1,015
1951.....	7,661,276	7,339	1,044
1952.....	7,194,472	6,936	1,037
1953.....	5,917,423	5,760	1,027
1954.....	4,859,136	4,719	1,030
1955.....	4,456,578	3,801	1,172
1956.....	4,329,639	3,443	1,258
1957.....	3,155,354	2,795	1,129
1958.....	2,519,939	2,021	1,247
1959.....	2,549,517	1,720	1,482
1960.....	2,404,093	1,729	1,390
1961.....	2,027,826	1,323	1,533
1962.....	2,087,310	1,281	1,629
1963.....	2,289,943	1,151	1,989
1964.....	2,971,133	1,188	2,501
1965.....	3,413,928	1,181	2,891
1966.....	3,467,254	1,146	3,026
1967.....	3,601,559	1,162	3,099
1968.....	3,925,114	1,103	3,559

THE MINES DIVISION

CLASSIFICATION OF OUTPUT IN TONS DURING THE YEARS 1949 to 1968 INCLUSIVE

Year	Bituminous	Sub-bituminous	Coal used in Coke Production	Tons of Briquettes Made	Tons of Coke Made
1949.....	5,495,327	3,121,656	91,361	460,643	54,922
1950.....	4,793,020	3,325,186	23,079	409,855	16,657
1951.....	4,659,289	3,001,967	6,957	345,768	3,559
1952.....	4,378,622	2,815,850	3,474	661,862	574
1953.....	3,517,499	2,399,924	...	665,556	...
1954.....	2,402,185	2,456,951	...	635,501	...
1955.....	2,114,892	2,341,686	...	435,785	...
1956.....	2,064,723	2,264,916	...	525,202	...
1957.....	1,265,844	1,889,510	...	265,645	...
1958.....	834,256	1,685,683	...	128,512	...
1959.....	814,819	1,734,698	...	99,499	...
1960.....	863,517	1,540,576	2,352	44,111	1,216
1961.....	666,226	1,361,600	...	54,534	493
1962.....	590,139	1,497,171	...	28,631	40
1963.....	635,650	1,654,293	...	37,358	11,677
1964.....	866,221	2,104,912	843	38,230	19,971
1965.....	859,176	2,554,752	6,412	34,658	36,804
1966.....	879,569	2,587,685	46,016	27,904	11,587
1967.....	937,836	2,663,723	28,824	21,503	7,430
1968.....	948,480	2,976,654	20,241	7,256	1,261
			1,658		

* Char

AMOUNT OF COAL SOLD IN TONS DURING THE YEARS 1949 to 1968 INCLUSIVE FOR CONSUMPTION IN:

Year	Railways	Alberta	B.C.	Sask.	Manitoba	Ontario	Quebec	U.S.A.	China and Japan	Total
1949.....	3,012,425	1,614,306	891,132	1,232,890	639,456	187,976	...	45,972	3,475	7,617,632
1950.....	2,308,365	1,672,519	873,558	1,366,723	586,920	312,563	...	105,765	...	7,226,413
1951.....	2,443,326	1,427,114	898,533	1,322,162	492,737	182,753	...	80,270	44,317	6,891,212
1952.....	2,065,365	1,234,307	1,021,484	1,241,716	384,924	126,381	...	71,817	1,588	6,147,582
1953.....	1,625,783	1,045,482	859,385	1,034,594	274,758	73,117	...	47,119	...	4,960,238
1954.....	743,743	1,064,817	891,194	995,882	292,455	85,836	...	33,124	...	4,107,051
1955.....	431,639	1,080,379	932,764	893,377	293,719	90,727	...	32,941	...	3,755,546
1956.....	385,388	1,020,538	860,329	871,719	304,918	75,029	120	45,692	...	3,563,733
1957.....	152,693	876,395	672,527	680,297	247,480	68,379	165	46,079	...	2,784,760
1958.....	56,420	838,535	532,911	584,025	226,302	54,887	122	37,154	40,745	2,352,308
1959.....	39,122	874,622	437,118	549,663	239,503	52,828	80	33,455	124,719	2,351,110
1960.....	1,045	845,806	379,668	362,383	201,372	40,305	157	30,283	361,336	2,222,355
1961.....	51,128	791,631	321,909	232,848	159,744	35,466	115	18,066	343,720	1,954,627
1962.....	32,003	901,107	283,651	347,012	153,561	29,952	75	9,219	316,787	2,073,367
1963.....	16,001	1,073,606	262,433	343,634	131,471	29,309	118	5,583	310,558	2,272,713
1964.....	14,451	1,620,893	261,990	279,171	132,590	32,261	x	14,805	612,544	2,958,791
1965.....	10,798	1,928,684	276,608	388,796	130,861	31,733	85	14,123	614,801	3,996,489
1966.....	6,631	2,034,814	197,521	376,589	115,771	24,956	*	12,206	709,877	3,478,410
1967.....	3,960	2,019,036	166,668	503,396	92,934	21,956	...	9,857	773,505	3,591,312
1968.....	3,201	2,672,852	142,589	175,948	73,558	15,097	54	9,549	899,437	3,902,285

x Includes 46 tons to N.W.T.

* Includes 8 tons to West Germany

THE MINES DIVISION

COAL PRODUCED BY YEARS FROM 1964 to 1968

BITUMINOUS COAL FIELD

Areas	1964	1965	1966	1967	1968
Group 1:					
Cascade.....	240,505	243,084	245,469	288,954	283,719
Smoky River.....	...	...	...	24,835	1,265
Group 2:					
Crowanest.....	554,783	609,408	632,974	620,962	660,780
Group 3:					
Coalspur.....	5,896	194	...	...	...
Lethbridge.....	65,037	6,490	1,126	3,085	2,716
Total.....	866,221	859,176	879,569	937,836	948,480

SUB-BITUMINOUS COAL FIELD

Group 4:					
Ardley.....	34,405	32,034	30,358	25,130	23,366
Brooks.....	6,942	6,783	6,384	5,160	4,946
Carbon.....	14,011	11,731	9,028	7,457	4,883
Champion.....	3,151	3,028	1,507	458	...
Drumheller.....	246,123	285,175	231,893	185,037	162,018
Edmonton.....	86,478	92,277	80,288	63,123	47,892
Gleichen.....	829	223	...	...	...
Pembina.....	841,281	968,488	1,133,180	1,196,637	1,945,467
Taber.....	27,116	104,398	60,670	9,929	4,713
Wetaakiwin.....	2,341	1,750	1,372	114	...
Group 5:					
Camrose.....	23,411	26,400	17,808	16,842	15,408
Castor.....	615,072	768,181	774,339	859,694	636,349
Redcliff.....	1,993	2,016	1,856	541	...
Sheerness.....	164,364	210,746	199,248	259,720	100,115
Tofield.....	15,390	17,370	15,504	12,026	9,629
Westlock.....	22,005	24,152	24,250	21,855	21,848
Total.....	2,104,912	2,554,752	2,587,685	2,663,723	2,976,634

HOW THE TOTAL TONNAGE OF BITUMINOUS COAL FROM THE PROVINCE WAS DISPOSED OF BY AREAS DURING 1968

Areas	Sold for Consumption in:								Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Quebec	Ontario	United States	Japan						
Group 1: Cascade..... Sasky River..	230 ...	9020 ...	11933 ...	...	54 ...	12535 ...	9434 ...	226956 ...	270162 ...	38002 1265	3123 ...	26636 ...	932 ...	283719 1265
Group 2: Growsnest....	...	8192	75372	...	...	...	...	582481	666045	8778	...	9768	4275	660780
Group 3: Lethbridge...	...	2508	...	...	...	...	...	...	2508	1350	...	1142	...	2716
Total.....	230	19720	87305	...	54	12535	9434	809437	998715	49395	3123	37546	5207	948480

THE MINES DIVISION

HOW THE TOTAL TONNAGE OF SUB-BITUMINOUS COAL FROM THE PROVINCE WAS DISPOSED OF BY AREAS DURING 1968

Areas	Sold for Consumption in:								Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States						
Group 4:														
Ardley.....	...	23154	...	...	...	...	...	...	23154	...	212	...	...	23366
Brooks.....	...	4946	...	...	...	...	...	...	4946	...	...	...	...	4946
Carbon.....	...	4883	...	...	...	...	...	...	4883	...	...	...	...	4883
Drumheller..	733	96303	20840	28662	8581	2025	...	...	157144	25003	...	19017	1112	162018
Edmonton....	...	47396	...	...	...	496	...	...	47892	...	...	...	...	47892
Pembina.....	...	1944147	...	...	...	...	...	...	1944147	...	1320	...	...	1945467
Taber.....	...	3907	...	...	...	...	...	25	3932	190	781	190	...	4713
Group 5:														
Camrose.....	...	13389	...	...	...	...	...	...	13389	...	2019	...	...	15408
Castor.....	1341	471326	33935	79539	48387	41	...	...	654969	...	1380	...	...	636349
Sheerness...	897	14682	509	67347	16590	...	...	90	100115	...	...	...	...	100115
Tofield.....	...	9167	...	...	...	...	...	...	9167	280	462	280	...	9629
Westlock....	...	19832	...	...	...	...	...	...	19832	...	2016	...	...	21848
Total.....	2971	2653132	55284	175948	79558	2562	...	115	2963570	25473	8190	19487	1112	2976634

HOW THE TOTAL TONNAGE OF COAL FROM THE PROVINCE WAS DISPOSED OF BY MONTHS DURING 1968

Months	Sold for Consumption in:									Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan						
January	252	215334	14001	52065	15841	3779	54	1213	66678	370217	2289	1522	3056	1798	369174
February	190	180276	13198	26920	8956	2025	...	1127	52454	285446	16401	696	877	3294	298372
March	236	214155	10520	7200	3172	1362	...	934	79796	317375	428	1401	9301	18	308885
April	53	228036	14918	1081	590	361	...	138	79796	324793	3353	3456	1468	4	330310
May	...	217456	10014	2223	118	246	...	414	67122	317603	12394	73	955	11	329104
June	35	192487	5974	4467	76	319	...	1183	54556	238797	18680	25	15	6	277181
July	...	195863	5427	...	40	106	...	850	76447	278733	...	12	15690	...	263055
August	137	185688	3742	1020	1342	1008	...	1177	59820	253934	5028	28	3717	10	252563
September	524	184220	11503	3506	4155	925	...	1082	65310	271195	4225	498	308	1119	274491
October	996	227889	19848	16392	14164	1650	...	906	71119	328974	3114	1208	3932	14	333350
November	534	302660	15140	18989	14367	1754	...	265	77686	431395	3093	2038	10180	13	426333
December	244	329088	18004	21075	10737	1552	...	290	58653	439643	5863	1356	7534	32	439296
Total:	3201	2672852	142589	175948	73558	15097	54	9549	809437	3902285	74868	11313	57033	6319	3925114
% of Total Disposition:	.08	68.49	3.65	4.51	1.88	.39	.01	.25	20.74						

How the total Tonnage of BRIQUETTES from the Province was disposed of during 1968

Briquettes:	3379	1876	1103	40	37	520	6955	583	336	638	...	7236
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How the total Tonnage of CHAR from the Province was disposed of during 1968

Char:	178	584	...	762	185	596	282	...	1261
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THE MINES DIVISION

HOW THE TOTAL TONNAGE OF BITUMINOUS COAL WAS DISPOSED OF BY MONTHS DURING 1968

Months	Sold for Consumption in:								Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan					
January	44	5099	5964	...	...	3187	54	1111	66678	82137	1842	3056	1798	79125
February	48	4729	7841	...	...	1868	...	1127	52454	74087	16378	...	3294	81151
March	...	972	7620	...	...	1321	...	928	79796	90637	299	8716	18	82202
April	...	404	10907	...	...	361	...	138	79796	91606	3211	1367	4	96569
May	...	619	8386	...	...	246	...	414	67122	76787	3909	873	11	79812
June	...	348	4801	...	...	319	...	1183	54556	61207	8781	...	6	69982
July	...	61	5170	...	...	106	...	850	76447	82634	...	15690	...	66944
August	...	617	1724	...	...	921	...	1177	59820	64259	4582	2668	10	76893
September	48	651	5606	...	...	661	...	1052	65310	73328	3572	...	7	76893
October	...	1763	10690	...	...	931	...	906	71119	85409	2326	1585	14	86136
November	46	2021	8407	...	...	1314	...	265	77686	89739	1061	2782	13	88005
December	44	2436	10189	...	...	1300	...	283	58653	72905	3434	809	32	75498
Total:	230	19720	87305	...	...	12555	54	9434	809437	938715	49395	37546	5207	948480
% of Total Disposition:	.02	2.10	9.30	...	...	1.34	.01	1.00	86.23					

HOW THE TOTAL TONNAGE OF SUB-BITUMINOUS COAL WAS DISPOSED OF BY MONTHS DURING 1968

Months	Sold for Consumption in:								Total Disposition	Put to Stock	Put to Waste	Lifted from Stock	Lifted from Waste	Total Tonnage
	Sold to Railway Companies	Alberta	British Columbia	Sask.	Manitoba	Ontario	Quebec	United States	Japan					
January	208	210235	8037	53065	15841	592	...	102	...	288080	447	1522	...	290049
February	142	175547	5657	26920	8956	157	...	...	...	217379	23	696	...	217221
March	236	213183	2900	7200	3172	41	...	6	...	226738	129	401	...	226683
April	53	227632	4011	1081	590	...	...	...	...	233367	142	333	...	233741
May	...	216837	1628	22233	118	...	...	...	...	240816	8485	73	...	249292
June	35	191839	1173	4467	76	...	...	...	...	197590	9899	25	15	207499
July	...	195802	257	...	40	...	...	...	...	196099	...	12	...	196111
August	137	185071	2018	1020	1342	87	...	...	...	189675	446	28	...	189100
September	476	183569	5897	3506	4155	264	...	...	...	197867	653	498	...	197598
October	996	226126	9158	16392	14164	729	...	...	...	267565	788	1208	...	267214
November	488	300639	6733	18989	14367	440	...	...	...	341656	2032	2038	...	338328
December	200	326652	7815	21075	10737	252	...	7	...	366738	2429	1356	...	363798
Total:	2971	2653132	55984	175948	73558	2562	...	115	...	2963570	25473	8190	1112	2976634
% of Total Disposition:	.10	89.51	1.87	5.94	2.48	.09	...	.01	...	...	...	...	...	...

THE MINES DIVISION

PER CAPITA PRODUCTION OF MINES BY AREAS
BITUMINOUS COAL FIELD

Area	Strip and Underground Mining						Strip Mining						Underground Mining					
	Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man	Total No. of man-shifts	Tons of coal mined per eight-hour man-shift	Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man	Total No. of man-shifts	Tons of coal mined per eight-hour man-shift	Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per man	Total No. of man-shifts	Tons of coal mined per eight-hour man-shift	Gross tons of coal mined	Total average No. of men employed	Tons of coal mined per eight-hour man-shift
Group 1:																		
Cascade.....	283,719	224	1,267	56,409	5.03	45,626	8	5,703	2,010	22.70	238,093	216	1,102	54,399	4.38			
Smoky River.....	1,265	15	84	945	1.39	...	...	...	...	...	1,265	15	84	945	1.39			
Group 2:																		
Crownest.....	660,780	488	1,354	115,598	5.72	96,662	18	5,370	4,986	19.39	564,118	470	12,002	110,612	5.10			
Group 3:																		
Lethbridge.....	2,716	5	543	390	6.96	2,373	4	593	300	7.91	343	1	343	90	3.81			
Total.....	948,480	732	1,296	173,342	5.47	144,661	30	4,822	7,296	19.83	803,819	702	1,145	166,046	4.94			

THE MINES DIVISION

OUTPUT AND NUMBER OF MINES PRODUCING

Kind of Coal	Under 1,000 Tons		1,000 to 5,000 Tons		5,000 to 10,000 Tons		10,000 to 50,000 Tons		50,000 to 100,000 Tons		100,000 to 150,000 Tons		150,000 to 200,000 Tons		200,000 to 300,000 Tons		Over 300,000 Tons		Total	
	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output	No.	Output
Bituminous.....	2	3,981	..	...	1	29,334	1	67,328	..	...	..	...	1	283,719	1	564,118	6	948,480
Sub-bituminous.	6	21,553	7	61,477	6	140,545	1	97,482	1	100,115	..	...	1	222,384	2	2,333,078	24	2,976,634
Total.....	8	25,534	7	61,477	7	169,879	2	164,810	1	100,115	..	...	2	506,103	3	2,897,196	30	3,925,114

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

SIZE GRAD- ING AREA	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE- PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
FOR CONSUMPTION IN ALBERTA								
Cascade	1779	140	...	1	133	...	6967	9020
Crowsnest	...	...	...	...	2303	...	5889	8192
Lethbridge	...	472	437	117	1415	5	62	2508
Ardley	...	5518	3854	608	9849	...	3325	23154
Brooks	...	1820	...	426	1902	...	798	4946
Carbon	1686	...	...	505	1411	...	1281	4883
Drumheller	...	7470	2039	2624	9540	31499	43131	96303
Edmonton	2661	10067	2202	11561	11358	...	9547	47396
Pembina	...	2829	1965	6335	5591	1926264	1163	1944147
Taber	24	1724	...	...	2090	...	69	3907
Camrose	...	2113	3500	1280	2823	397	3276	13389
Castor	222082	29327	15111	13087	80426	616	110677	471326
Sheerness	...	1268	1342	1431	10203	...	438	14682
Tofield	...	1487	2177	640	3197	388	1278	9167
Westlock	...	3660	1923	6471	5100	960	1718	19832
Total	228232	67895	34550	45086	147341	1960129	189619	2672852
FOR CONSUMPTION BY RAILWAY COMPANIES								
Cascade	230	...	...	...	...	...	...	230
Drumheller	...	174	308	227	24	...	...	733
Castor	...	...	1341	...	...	...	...	1341
Sheerness	...	33	806	...	58	...	...	897
Total	230	207	2455	227	82	...	...	3201

AMOUNT OF COAL DISPOSED OF DURING THE YEAR BY AREA, ACCORDING TO SIZE GRADING

AREA \ SIZE GRADING	RUN OF MINE	LUMP OR COBBLE	EGG	NUT OR STOVE	PRE-PARED STOKER	NUT SLACK	SLACK	TOTAL BY AREA.
		FOR CONSUMPTION		IN ONTARIO				
Cascade	...	496	...	...	10438	1601	...	12535
Drumheller	...	1475	496	...	54	...	...	2025
Edmonton	...	402	...	94	...	...	...	496
Castor	...	41	...	...	...	...	...	41
Total	...	2414	496	94	10492	1601	...	15097
		FOR CONSUMPTION		IN UNITED STATES				
Cascade	7839	...	...	...	...	1595	...	9434
Taber	...	...	...	...	25	...	...	25
Sheerness	...	...	...	...	90	...	...	90
Total	7839	...	...	...	115	1595	...	9549
		FOR CONSUMPTION		IN JAPAN				
Cascade	...	...	...	...	...	...	226956	226956
Crowsnest	...	...	...	...	...	582481	...	582481
Total	...	...	...	...	...	582481	226956	809437
		FOR CONSUMPTION		IN QUEBEC				
Cascade	...	...	...	...	...	...	54	54

THE MINES DIVISION

[illegible]

PRODUCTION OF COAL PER EIGHT-HOUR MAN-SHIFT
For the Years 1949 to 1968 Inclusive

Year	Gross tons of coal mined	Total No. of Eight-hour Man-shifts	Average No. of tons of coal mined per Eight-hour shift
1949.....	8,616,983	1,910,922	4.510
1950.....	8,118,206	1,735,316	4.678
1951.....	7,661,276	1,683,061	4.552
1952.....	7,194,472	1,522,264	4.726
1953.....	5,917,423	1,141,531	5.184
1954.....	4,859,136	943,558	5.150
1955.....	4,456,578	783,239	5.690
1956.....	4,329,639	750,318	5.770
1957.....	3,155,354	535,346	5.894
1958.....	2,519,939	386,636	6.517
1959.....	2,549,517	377,870	6.747
1960.....	2,404,093	366,970	6.551
1961.....	2,027,826	285,142	7.112
1962.....	2,087,310	277,198	7.530
1963.....	2,289,943	254,671	8.992
1964.....	2,971,133	285,039	10.423
1965.....	3,413,928	288,871	11.820
1966.....	3,467,254	275,195	12.590
1967.....	3,601,559	263,969	13.643
1968.....	3,925,114	251,053	15.634

THE MINES DIVISION

AMOUNT OF MINE TIMBER USED DURING THE YEAR

BITUMINOUS COAL FIELD

Area	Timber lineal feet	Lumber B.M. feet	Lagging lineal feet	Ties lineal feet	Sprags lineal feet
Group 1:					
Cascade.....	218,281	58,864	987,540	9,596	...
Smoky River.....	5,000	1,000	6,000	...	...
Group 2:					
Crownest.....	1,079,000	637,375	104,200	2,538	...
Total.....	1,302,281	697,239	1,097,740	12,134	...

SUB-BITUMINOUS COAL FIELD

Group 4:					
Drumheller.....	96,501	...	...	13,351	...
Edmonton.....	104,700	17,000	11,000	7,000	...
Total.....	201,201	17,000	11,000	20,351	...

PARTICULARS OF LAMPS IN THE BITUMINOUS AND SUB-BITUMINOUS COAL FIELDS DURING THE YEARS 1967 and 1968.

BITUMINOUS COAL FIELD

	1967	1968
Portable Electric Lamps, Edison Cap Type.....	526	496
Wolfe Flame Type.....	42	34
Total.....	568	530

SUB-BITUMINOUS COAL FIELD

Portable Electric Lamps, Edison Cap Type.....	257	214
Wolfe Flame Type.....	16	10
Total.....	273	224

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Name of Explosives							Total
	Stumping Powder	Monobel	BL-100	CXL-ite	Airdox	Amex	Forcite	
Group 1:								
Cascade.....	...	34,250	...	...	...	33,180	5,700	73,130
Smoky River...	...	500	...	...	...	...	...	500
Group 2:								
Crowsnest.....	...	673	...	...	...	...	...	673
Total.....	...	35,423	...	...	...	33,180	5,700	74,303

SUB-BITUMINOUS COAL FIELD

Group 4:								
Ardley.....	2,050	300	...	...	...	...	...	2,350
Brooks.....	...	...	800	...	...	...	...	800
Carbon.....	...	...	...	...	...	...	235	235
Drumheller....	...	...	...	...	9,500	...	...	9,500
Edmonton.....	...	7,789	...	...	...	...	...	7,789
Pembina.....	2,020	...	...	...	...	...	4,134	6,154
Taber.....	...	50	...	...	...	...	...	50
Group 5:								
Camrose.....	...	...	...	...	...	...	100	100
Castor.....	558	7,650	...	...	...	...	...	8,208
Tofield.....	...	...	...	...	...	...	1,600	1,600
Westlock.....	30	...	...	...	...	...	...	30
Total.....	4,658	15,789	800	...	9,500	...	6,069	36,816

THE MINES DIVISION

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING COAL

BITUMINOUS COAL FIELD

Area	Electric Detonators	Prima cord	Airdox	Total
Group 1:				
Cascade.....	36,708	...	...	36,708
Smoky River.....	420	...	...	420
Group 2:				
Crowsnest.....	607	...	...	607
Total.....	37,735	...	...	37,735

SUB-BITUMINOUS COAL FIELD

Group 4:				
Ardley.....	2,543	...	...	2,543
Brooks.....	1,680	...	...	1,680
Carbon.....	175	...	...	175
Drumheller.....	...	...	9,500	9,500
Edmonton.....	8,272	...	...	8,272
Pembina.....	4,814	...	...	4,814
Taber.....	30	...	...	30
Group 5:				
Camrose.....	475	...	...	475
Castor.....	9,001	...	...	9,001
Tofield.....	556	...	...	556
Westlock.....	150	...	...	150
Total.....	27,696	...	9,500	37,196

There were 2 mis-fired shots blasting coal in the Bituminous Field.

There was 1 mis-fired shot blasting coal in the Sub-bituminous Field.

NUMBER OF TONS OF COAL PRODUCED PER POUND OF
EXPLOSIVES USED

BITUMINOUS COAL FIELD

Area	Number of tons of coal mined	Number of pounds of explosives used	Tons of coal mined per pound of explosives used
Group 1:			
Cascade.....	283,719	73,130	3.88
Smoky River.....	1,265	500	2.53
Group 2:			
Crowsnest.....	660,780	673	982.00
Group 3:			
Lethbridge.....	2,716	...	...
Total.....	948,480	74,303	12.77

SUB-BITUMINOUS COAL FIELD

Group 4:			
Ardley.....	23,366	2,350	9.94
Brooks.....	4,946	800	6.18
Carbon.....	4,883	235	20.78
Drumheller.....	162,018	9,500	17.05
Edmonton.....	47,892	7,789	6.15
Pembina.....	1,945,467	6,154	316.13
Taber.....	4,713	50	94.30
Group 5:			
Camrose.....	15,408	100	154.08
Castor.....	636,349	8,208	77.53
Sheerness.....	100,115	...	...
Tofield.....	9,629	1,600	6.02
Westlock.....	21,848	30	728.27
Total.....	2,976,634	36,816	80.85

THE MINES DIVISION

QUANTITY OF EXPLOSIVES USED IN POUNDS FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Pellet	Monobel	Cilgel	CXL-ite	Amex	Cardox	Forcite	Total
Group 1: Cascade.....	6,100	77,420	...	16,250	99,770
Group 2: Crowsnest....	2,682	75,750	...	12,250	90,682
Total.....	8,782	153,170	...	28,500	190,452

SUB-BITUMINOUS COAL FIELD

Group 4: Brooks.....	...	...	...	...	...	...	2,100	2,100
Drumheller..	...	80	...	3	...	...	...	83
Total.....	...	80	...	3	...	...	2,100	2,183

ESTIMATED NUMBER OF SHOTS FIRED FOR BLASTING ROCK
IN COAL MINES

BITUMINOUS COAL FIELD

Area	Electric Detonators	Prime cord	Total
Group 1: Cascade.....	13,737	...	13,737
Group 2: Crownsnest.....	2,553	2,800	5,353
Total.....	16,290	2,800	19,090

SUB-BITUMINOUS COAL FIELD

Group 4: Brooks..... Drumheller.....	120 90	... ...	120 90
Total.....	210	...	210

There were no mis-fired shots blasting rock in coal mines.

THE MINES DIVISION

ELECTRICITY

Area	Number of Mines using Electricity	Horsepower of Electrical Equipment in Use		Total Horsepower	Purchased Power
		Above Ground	Below Ground		
Ardley.....	1	14	...	14	15,998
Brooks.....	1	40	...	40	50,240
Camrose.....	1	12	...	12	5,000
Carbon.....	2	40	117	157	4,680
Cascade.....	1	5,227	1,565	6,792	10,422,400
Castor.....	3	3,777	...	3,777	4,084,656
Crowsnest.....	1	3,412	1,585	4,997	9,922,000
Drumheller.....	4	1,492	851	2,343	893,671
Edmonton.....	3	497	793	1,290	330,318
Lethbridge.....	1	30	...	30	1,050
Pembina.....	2	6,756	...	6,756	7,976,170
Sheerness.....	1	1,588	...	1,588	730,800
Smoky River.....	1	340	742	1,082	5,000
Taber.....	1	79	...	79	2,850
Tofield.....	1	106	...	106	43,475
Westlock.....	2	38	...	38	18,830
Total.....	26	23,448	5,653	29,101	34,507,138

COAL-CUTTING MACHINERY

Area	No. of Machines Operated by:			Tons of Coal Mined by:	
	Electricity	Compressed Air		Electricity	Compressed Air
		Picks	Machines		
Cascade.....	3	8	...	185,178	26,457
Crowsnest.....	2	150	...	218,490	362,000
Drumheller.....	4	...	...	95,121	...
Edmonton.....	13	...	...	37,841	...
Smoky River.....	1	...	...	1,050	...
Total.....	23	158	...	537,680	388,457

THE MINES DIVISION

ACCIDENTS AS THEY OCCURRED BY MONTHS DURING THE YEAR 1968

Months	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
January.....	1	1	..	..	5	5	6
February.....	3	3	..	..	2	2	5
March.....	1	1	..	..	3	3	4
April.....	2	2	..	..	2	2	4
May.....	1	1	..	..	..	..	1
June.....	..	2	..	2	..	..	..	..	2
July.....	..	2	..	2	..	1	1	2	4
August.....	1	1	1	1
September.....	1	1	..	..	..	..	1
October.....	2	2	..	..	..	..	2
November.....	1	1	..	..	1	1	2
December.....	1	1	..	1	..	1	2
Total.....	..	2	15	17	..	2	15	17	34

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND
DURING THE YEAR 1968

Causes	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Fall of roof or sides.....	1	6	7	7
Haulage.....	2	3	5	5
Machinery.....	..	1	12	13	..	..	..	..	13
Miscellaneous.....	1	1	..	..	..	..	1
Packing Timber.....	2	2	2
Slipped and Fell.....	2	2	..	..	2	2	4
Timbering.....	2	2	2
Total.....	..	1	15	16	..	3	15	18	34

ACCIDENTS OCCURRING IN THE PROVINCE ABOVE AND BELOW GROUND FOR THE
YEAR 1968, CLASSIFIED ACCORDING TO THE AREA IN WHICH THEY OCCURRED

BITUMINOUS

Area	Above Ground				Below Ground				Total Above and Below Ground
	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total	
Cascade.....	5	5	..	..	8	8	13
Crowsnest.....	..	1	7	8	..	1	7	8	16
Total.....	..	1	12	13	..	1	15	16	29

SUB-BITUMINOUS

Drumheller.....	..	..	..	..	..	1	..	1	1
Edmonton.....	..	..	1	1	..	1	..	1	2
Pembina.....	..	..	1	1	..	..	..	..	1
Castor.....	..	..	1	1	..	..	..	..	1
Total.....	..	..	3	3	..	2	..	2	5

THE MINES DIVISION

NUMBER OF TONS PRODUCED PER ACCIDENT

BITUMINOUS COAL FIELD

Area	Output	No. of Tons Produced Per Accident			
		Fatal	Serious	Slight	Total
Group 1:					
Cascade.....	283,719	...	...	21,825	21,825
Smoky River.....	1,265	...	...	...	...
Group 2:					
Crownsnest.....	660,780	...	330,390	47,199	41,299
Group 3:					
Lethbridge.....	2,716	...	...	...	...
Total.....	948,480	...	474,240	35,129	32,706

SUB-BITUMINOUS COAL FIELD

Group 4:					
Ardley.....	23,366	...	...	...	...
Brooks.....	4,946	...	...	...	...
Carbon.....	4,883	...	...	...	...
Drumheller.....	162,018	...	162,018	...	162,018
Edmonton.....	47,892	...	47,892	47,892	23,946
Pembina.....	1,945,467	...	...	1,945,467	1,945,467
Taber.....	4,713	...	...	...	...
Group 5:					
Camrose.....	15,408	...	...	...	...
Castor.....	636,349	...	...	636,349	636,349
Sheerness.....	100,115	...	...	...	...
Tofield.....	9,629	...	...	...	...
Westlock.....	21,848	...	...	...	...
Total.....	2,976,634	...	1,488,317	992,211	595,327

SUMMARY

Bituminous.....	948,480	...	474,240	35,129	32,706
Sub-bituminous.....	2,976,634	...	1,488,317	992,211	595,327
Total.....	3,925,114	...	981,279	130,837	115,445

CLASSIFICATION OF ACCIDENTS ACCORDING TO OUTPUT OF MINES WHICH PRODUCED DURING THE YEAR 1968

Accidents	Under 1,000 tons	1,000 to 5,000 tons	5,000 to 10,000 tons	10,000 to 50,000 tons	50,000 to 100,000 tons	100,000 to 150,000 tons	150,000 to 200,000 tons	200,000 to 300,000 tons	Over 300,000 tons	Total
Fatal.....
Serious	1	1	...	...	...	2	4
Slight.....	1	...	...	...	14	15	30
Total.....	2	1	...	...	14	17	34

TONS OF COAL PRODUCED PER ACCIDENT

Fatal.....	...	...	...	...	...	...	...	...	...	...
Serious.....	...	...	...	169,879	164,810	...	...	...	1,448,598	981,279
Slight.....	...	...	...	169,879	...	...	...	36,150	193,146	130,837
Total.....	...	...	...	84,939	164,810	...	...	36,150	170,423	115,445

THE MINES DIVISION

ACCIDENTS

SUMMARY TABLE SHOWING ACCIDENTS OCCURRING IN THE MINES FROM 1949 to 1968
INCLUSIVE, REPORTABLE UNDER THE COAL MINES REGULATION ACT.

Year	Output	Accidents			Tons of Coal Mined Per Accident		
		Fatal	Serious	Slight	Fatal	Serious	Slight
1949.....	8,616,983	13	89	108	662,076	96,708	79,694
1950.....	8,118,206	20	86	97	405,910	94,398	83,693
1951.....	7,661,276	9	85	53	851,253	90,133	144,552
1952.....	7,194,472	7	79	79	1,027,782	91,069	91,069
1953.....	5,917,423	10	59	60	591,742	100,295	98,623
1954.....	4,859,136	8	51	41	607,392	95,277	118,516
1955.....	4,456,578	3	54	52	1,485,526	82,529	85,703
1956.....	4,329,639	6	34	33	721,607	127,342	131,201
1957.....	3,155,354	2	25	15	1,577,677	126,214	210,357
1958.....	2,519,939	6	19	8	419,990	132,628	314,992
1959.....	2,549,517	1	18	10	2,549,517	141,639	254,952
1960.....	2,404,093	2	16	21	1,202,047	150,256	114,481
1961.....	2,027,826	1	9	11	2,027,826	225,314	184,348
1962.....	2,087,310	4	5	23	521,827	417,462	90,753
1963.....	2,289,943	1	3	11	2,289,943	763,314	208,177
1964.....	2,971,133	1	3	20	2,971,133	990,378	148,557
1965.....	3,413,928	6	3	13	568,988	1,137,976	262,610
1966.....	3,467,254	1	4	28	3,467,254	866,814	123,830
1967.....	3,601,559	...	4	17	...	900,390	211,856
1968.....	3,925,114	...	4	30	...	981,278	130,837

COMPARISON OF PROTECTIVE CLOTHING USED FOR THE YEARS
1966, 1967 and 1968.

Clothing	1966	1967	1968
Hard Hats.....	873	1,114	1,030
Safety Shoes, pairs...	533	746	691
Goggles, pairs.....	164	179	160
Knee Pads, pairs.....	6	2	...

COMPARISON OF ACCIDENTS PER 1,000,000 TONS AND PER 1,000 MEN EMPLOYED, 1949 - 1968

Year	Tonnage	Total No. of men employed	Fatal Accidents			Serious Accidents			Slight Accidents			Total	
			No.	Per 1,000,000 tons	Per 1,000 men employed	No.	Per 1,000,000 tons	Per 1,000 men employed	No.	Per 1,000,000 tons	Per 1,000 men employed	Per 1,000,000 tons	No.
1949.....	8,616,983	8,682	13	1.51	1.50	89	10.33	10.25	108	12.53	12.44	24.37	210
1950.....	8,118,206	7,999	20	2.46	2.50	86	10.59	10.75	97	11.95	12.13	25.01	203
1951.....	7,661,276	7,339	9	1.17	1.23	85	11.09	11.58	53	6.92	7.22	19.19	147
1952.....	7,194,472	6,926	7	0.97	1.01	79	10.98	11.39	79	10.98	11.39	22.93	165
1953.....	5,917,423	5,760	10	1.69	1.74	59	9.97	10.24	60	10.14	10.42	23.79	129
1954.....	4,719	4,719	8	1.65	1.70	51	10.49	10.81	41	8.43	8.69	22.40	104
1955.....	4,859,136	3,803	3	0.67	0.79	54	12.12	14.21	52	11.67	13.68	20.50	21.19
1956.....	4,456,578	2,443	6	1.39	1.74	34	7.85	9.88	33	7.62	9.58	28.68	109
1957.....	3,155,354	2,795	2	0.63	0.72	25	7.92	8.94	15	4.75	5.37	16.86	73
1958.....	2,519,339	2,021	6	2.38	2.97	19	7.54	9.40	8	3.17	3.96	13.31	42
1959.....	2,519,517	1,720	1	0.39	0.58	18	7.07	10.46	10	3.92	5.82	13.10	33
1960.....	2,404,092	1,229	2	0.83	1.16	16	6.66	9.25	21	8.74	12.14	16.33	39
1961.....	2,627,826	1,323	1	0.49	0.76	6	4.44	6.80	11	5.42	8.31	13.22	21
1962.....	2,987,310	1,281	4	1.92	3.12	5	2.39	3.90	23	11.02	17.95	16.22	32
1963.....	2,285,945	1,151	1	0.44	0.87	3	1.31	2.61	11	4.80	9.56	15.33	15
1964.....	2,771,133	1,188	1	0.34	0.84	3	1.01	2.52	13	6.73	16.83	6.55	24
1965.....	2,413,928	1,181	6	1.76	5.08	3	0.88	2.54	23	3.81	11.01	8.08	24
1966.....	2,467,254	1,146	1	0.29	0.87	4	1.15	3.49	28	8.07	24.43	6.44	33
1967.....	3,631,559	1,162	...	...	...	4	1.11	3.44	17	4.72	14.63	9.52	21
1968.....	3,925,114	1,103	...	...	...	4	1.02	3.63	30	7.64	27.20	8.66	34

THE MINES DIVISION

BOARD OF EXAMINERS

The Board of Examiners during the year 1968 consisted of the following:

As representing:

The Mine Inspectorate: P. Melson, Director of Mines.
 Managers: H. Crawford and E. J. Panchyshyn.
 Underground Miners: G. B. Hunter.
 Strip Mine Workers: K. D. Wiltse.
 Secretary: M. B. Rasmussen.

Examinations for the following classes of certificates were held in Edmonton and Calgary on May 7th, 8th and 9th, 1968.

One candidate presented himself for examination for First Class (Underground) Certificate, and he was successful.

Two candidates presented themselves for examination for Second Class (Underground) Certificates, and both were unsuccessful.

Eleven candidates presented themselves for examination for Third Class (Underground) Certificates, and four were successful.

Three candidates presented themselves for examination for First Class Mine Electricians' Certificates, and one was successful.

One candidate presented himself for examination for Second Class Mine Electrician's Certificate, and he was unsuccessful.

Two candidates presented themselves for examination for Surveyors' (Underground) Certificates, and one was successful.

Six candidates presented themselves for examination for Managers' (Strip Mine) Certificates, and one was successful.

Two candidates presented themselves for examination for Foremen's (Strip Mine) Certificates, and one was successful.

Three candidates presented themselves for examination for Blasters' (Strip Mine) Certificates, and two were successful.

UNDERGROUND MINES

FIRST CLASS

Name	Address	Cert. No.	Date of Certificate
Strickland, Antony	Coleman	4	3- 6-68

THIRD CLASS

Watson, James S.	Edmonton	31	28- 5-68
Sprlak, John S.	Blairmore	32	3- 6-68
Emblau, Archibald A.	Canmore	33	19- 6-68
Watt, George G.	Banff	34	5-12-68

SURVEYOR

Belik, Stanley T.	Coleman	7	3- 6-68
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FIRST CLASS MINE ELECTRICIAN

Welch, Gordon J.	Seba Beach	17	30- 5-68
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STRIP MINES

MANAGER

McLellan, Daniel A.	Wabamun	22	30- 5-68
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FOREMAN

Bracko, Michael	Estevan, Sask.	56	3- 6-68
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BLASTER

Shellian, Andrew F.	Canmore	9	4- 6-68
Strandquist, Jeffrey D.	Halkirk	10	29-11-68

In addition to the foregoing, the following Interchange Second Class Certificate was issued under Sec. 79 of The Coal Mines Regulation Act.

Walsh, James	Natal, B.C.	8	2- 6-68
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The following certificate as Manager (Strip Mine) was issued, without examination, under Section 74 (2) of The Coal Mines Regulation Act.

Hulbert, Vans H.	Sparwood, B.C.	21	27- 5-68
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The following substitute Third Class Certificates were issued:

McIsaac, John D.	Calgary	28	10- 1-68
Makin, Gordon C.	Hillcrest Mines	29	15- 1-68
Vanoni, Hector	Blairmore	30	2- 4-68

EXAMINATIONS UNDER THE QUARRIES REGULATION ACT

Written examinations for certificates under the above Act were held in Edmonton and Calgary on May 7th, 1968.

Eight candidates presented themselves for examination for Managers' Certificates, and two were successful.

Eight candidates presented themselves for examination for Foremen's Certificates, and one was successful.

The following list gives the names of successful candidates.

THE MINES DIVISION

QUARRIES

MANAGER

Name	Address	Cert. No.	Date of Certificate
Fitzpatrick, Jeremiah J.	Fort McMurray	32	17- 5-68
Saxby, David J.	Fort McMurray	33	17- 5-68

FOREMAN

Love, Dennis E.	Fort McMurray	57	17- 5-68
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The following list gives the names of successful candidates, by oral examination, for Quarry Blasters' Certificates.

BLASTER

Houze, Armand A.	Hillcrest Mines	68	11- 3-68
Matthews, Henry	Hillcrest Mines	69	11- 3-68
Hoffmann, Frank G.	Exshaw	70	27- 3-68
Hoffman, Ralph A.	Exshaw	71	27- 3-68
Malloy, Robert E.	Cadomin	72	12-11-68

LIST OF PROSECUTIONS INSTITUTED UNDER THE COAL MINES REGULATION ACT, FOR THE YEAR ENDING DECEMBER 31, 1968.

Mine in which Contravention was Committed	Description of Defendant	Offence Charged	Result of Proceedings	Penalty	Costs
Premier Coal.....	Mine Omer....	Did permit the strip mine to be worked while there was no foreman in charge.....	Convicted..	Fined \$25.00....	\$5.00

THE MINES DIVISION

LIST OF MINES PRODUCING DURING

The Year 1968

Character of Coal: - Bituminous

<div>MINE NO.</div>	<div>OPERATOR</div>	<div>MINE OFFICE ADDRESS</div>	<div>MINE LOCATION L. S. S. T. R. M.</div>	<div>REGISTERED TRADE NAME</div>	<div>DATE OF OPENING</div>
2	<div>Cascade Area</div> <div>The Canmore Mines Limited...</div>	Canmore.....	Parts 24-10-5	Canmore Smokeless Coal, Canmore Briquettes.....	1891
1695 1747 1764	<div>Crownest Area</div> <div>Coleman Collieries Ltd.....</div> <div>Coleman Collieries Ltd.....</div> <div>Coleman Collieries Ltd.....</div>	<div>Coleman.....</div> <div>Coleman.....</div> <div>Coleman.....</div>	<div>12- 7- 6-5</div> <div>16-19- 9- 4-5</div> <div>566-10- 4-5</div>	<div>Coleman Coal.....</div> <div>Vicary Creek Coal.....</div> <div>Vicary Creek Coal.....</div>	1949 1957 1966
1762	<div>Lethbridge Area</div> <div>Bridge Mining Corporation Ltd.</div>	Lethbridge.....	7-21-10-21-4	Bridge.....	1968
1765	<div>Smoky River Area</div> <div>McIntyre Coal Mines Ltd.....</div>	Edmonton.....	57- 8-6 & 58- 9	.....	1967

LIST OF MINES PRODUCING DURING

The Year 1968

Character of Coal:- Sub-bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L. S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
809 1734	Ardley Area Sisson's Mine..... John Lyness.....	Alix..... Delburne.....	S.M. $\frac{1}{2}$ of 2-39-23-4 7-20-38-23-4	Sisson's Coal..... Lyness Coal.....	1919 1953
1404	Brooks Area Kleenbirm Collieries Ltd....	Bow City.....	P.M. of 15-17-17-4	Birmwel Coal.....	1932
724	Camrose Area Burnstad Coal Ltd.....	Round Hill.....	N. $\frac{1}{2}$ of 6-14-48-18-4	Burnstad's Coal.....	1917
194	Carbon Area New Ghost Pine Coal Co. Ltd. Castor Area	Three Hills.....	489-91-22-4	New Ghost Pine Coal.....	1909
1046 1578 1614	Battle River Coal Co. Ltd.... Forestburg Collieries Ltd.... Stettler Coal Co. Ltd.....	Halkirk..... Forestburg..... Halkirk.....	15-16-20-40-15-4 N.W. $\frac{1}{2}$ of 6-41-15-4 11-25-40-16-4	Cordel Coal, Vesta Coal Sterling, Victory Coal, Blue Flame Coal..... Diplomat Coal, Ambassador..... All-Fire Coal.....	1922 1941 1943
1666 1742	Drumheller Area Subway Coal Company..... Century Coals Limited.....	Rosedale..... East Coulee.....	15-16-28-19-4 14- 6-27-18-4	Subway Coal..... Atlas Coal, Commander Coal, New Wild Fire Coal, New Murray Coal, Western Gem, Hy-Grade, Purity Hard..... Utility Coal..... Premier Coal.....	1947 1956 1960 1964
1756 1759	Fox Coulee Coals Ltd..... Premier Coal.....	Drumheller..... East Coulee.....	2-17-29-20-4 12-13-28-19-4		

LIST OF MINES PRODUCING DURING

The Year 1968

Character of Coal:- Sub-bituminous

MINE NO.	OPERATOR	MINE OFFICE ADDRESS	MINE LOCATION L.S. S. T. R. M.	REGISTERED TRADE NAME	DATE OF OPENING
1582 1626 1727	Edmonton Area Egg Lake Coal Co. Ltd. Star-Key Mines Limited. Whitemud Creek Coal Co. Ltd.	Morinville..... St. Albert..... Edmonton.....	M. $\frac{1}{2}$ of 36-56-26-4 16, 10&11-35-54-25-4 S.W. $\frac{1}{4}$ of 13-52-25-4	Egg Lake Coal..... Star-Key Coal..... Red Hot Coal.....	1941 1945 1952
1670 1739 1757	Pembina Area Warburg Coal Co. Ltd. Charles Osterlag Alberta Coal Limited.	Warburg..... Edmonton..... Wabamun.....	12-13-49- 3-5 S.W. $\frac{1}{4}$ of 10-54- 7-5 Pts. of 14&15-55- 4-5	Pinter Coal..... Pembina Peerless Coal..... Whitewood.....	1948 1954 1962
443	Sheerness Area Battle River Coal Company Ltd.	Sheerness.....	S.E. $\frac{1}{4}$ of 13-29-13-4	Roselyn, Berry Creek, Volcano.....	1915
1604 1766	Taber Area Henry Miller (Taber Ajax).. Henry Miller (Taber Ajax).. Tofield Area	Taber..... Taber.....	1&12-10-17-4 4, 10&11-10-17-4	Taber Ajax..... Taber Ajax.....	1913 1968
215	Jet Construction Ltd..... Westlock Area	Ryley.....	S. $\frac{1}{2}$ of 14-49-18-4	Red Flame Coal.....	1909
1523 1562	Picardville Coal Co. (1960) Ltd. North Point Coal Co. Ltd...	Picardville..... Thorhild.....	16-35-58-27-4 1-11-60-21-4	Picardville Coal..... North Point Coal.....	1960 1939

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LIST OF QUARRIES PRODUCING DURING

The Year 1968

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	PRODUCT	QUARRY LOCATION L.S. S. T. R. M.	DATE OF OPENING
Q 2 Q 27 Q 28 Q 47 Q 50 Q 58 Q 67	Cascade Area Canada Cement Company Limited..... Canada Cement Company Limited..... Rundle Rock Building Stone Co. Ltd..... Loders, Lime Division..... Ribbon Creek Quarries Ltd..... Thunderstone Quarries Ltd..... Gallants Stone Supplies.....	Exshaw..... Exshaw..... Calgary..... Exshaw..... Exshaw..... Canmore..... Calgary.....	Limestone..... Shale..... Building Stone..... Limestone..... Building Stone..... Building Stone..... Building Stone.....	Pts. of 27&28-24- 9-5 7-25- 8-5 17,18&19-25-10-5 24-24-10-5 15,16& 2-23- 9-5 12- 7-24- 9-5 24-25-12-5	1906 1956 1962 1960 1960 1961 1968
Q 37	Castor Area Dresser Industries Inc.....	Roseland.....	Bentonite.....	1&210-31-42-17-4	1958
Q 8	Crownest Area Summit Lime Works Ltd.....	Crowneast, B.C.....	Limestone.....	7- 8- 5-5	1920
Q 5 Q 22	Edmonton Area Northwest Brick and Tile..... Inland Cement Industries Limited.....	Edmonton..... Edmonton.....	Clay..... Clay.....	N.E. 1/4 of 21-53-25-4 Pts. of 1&622-53-25-4	1911 1955
Q 69	Highwood Area Alberta Gypsum Ltd.....	Calgary.....	Gypsum.....	10-20- 9-5	1968
Q 21	Mountain Fork Area Inland Cement Industries Limited.....	Cardston.....	Limestone.....	13-30-46-23-5	1955

LIST OF QUARRIES PRODUCING DURING

The Year 1968

QUARRY NO.	OPERATOR	QUARRY OFFICE ADDRESS	PRODUCT	QUARRY LOCATION L. S. S. T. R. M.	DATE OF OPENING
Q 64	Magrath Area Alberta Oyster Shell Co.....	Cardston.....	Limestones.....	5- 3- 4-27-4	1964
Q 34 Q 45 Q 66	Pakowki Area Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited.	Medicine Hat..... Medicine Hat..... Medicine Hat.....	Shale..... Shale..... Shale.....	5, 6, 11 & 12-20- 8- 3-4 10 & 15- 9- 8- 4-4 6-11- 7- 2-4	1957 1959 1967
Q 7 Q 14	Redcliff Area Medicine Hat Brick & Tile Company, Limited. Medicine Hat Brick & Tile Company, Limited.	Medicine Hat..... Medicine Hat.....	Shale..... Shale.....	S.W. 1/4 of 1 & 2-31-12- 4-4	1913 1951
Q 24	No Area Consolidated Concrete Industries Ltd.....	Calgary.....	Shale.....	3, 4 & 5-32-21-29-4	1956
Q 36	No Area Northwest Brick and Tile.....	Edmonton.....	Shale.....	N.E. 1/4 of 9	1958
Q 41 Q 65	Syncrude Canada Ltd..... Great Canadian Oil Sands Limited.....	Edmonton..... Edmonton.....	Oil-Sands..... Oil-Sands.....	5 & 6-16-66-22-4 15-34-92-10-4 23-92-10-4	1959 1964

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